

REMARKS

1. The examiner has rejected claims 1-126 as being obvious over Ward et al (US Patent 5,491,495) in view of Jaeger et al (USPN 6326956).

2. In his assessment of Ward the Examiner correctly observes that "*Ward does not teach the interface surface which includes coded data indicative of a drawing field or indicative of an identity of an interface surface.*" He then argues that Jaeger teaches these features.

The Examiner suggests that the claim 1 feature of "*coded data indicative of a drawing field*" is equivalent to Jaeger's "*display screen (13) which displays a circular line pattern (39) at image display area (22) that enable[s] tracking of angular movement of the stylus (12)*" and cites Figures 2, 4 and col. 5, lines 49-63 to support his view.

In response, the Applicant makes the following comments:

(a) "Light" pattern: What the Examiner refers to as a "*line pattern 39*" is actually a "*light pattern 39*" in the specification (See col. 5, line 50).

(b) Light pattern as "*coded data indicative of a drawing field*": Since the Examiner suggests that Jaeger's "*light pattern*" is equivalent to the claimed "*coded data*" and since, in the claimed invention, the coded data is "*indicative of a drawing field*", if this were true one would expect to see Jaeger's light pattern being indicative of a drawing field. However, Jaeger's light pattern is not indicative of a drawing field but is indicative of the angular orientation or movement of the stylus.

The purpose of Jaeger is to effectively provide virtual knobs on a tablet which can be virtually twisted by placing the stylus in the centre dot of the virtual knob and twisting the stylus.

The Jaeger light pattern comes in two embodiments; one where a radial scan line rotates about the center of an annular light pattern, and the position is deduced from the phase difference between the rotation of the scan line and the stylus' detection of the scan line (in a similar manner to known lightpen techniques); and another where the light pattern includes areas of different intensity which are sensed directly by the stylus. This second embodiment is described in column 11 lines 42-49 as follows:

"In the embodiment of FIG. 18 the annular light pattern 39c is darkest at a particular location 135 in the band of light and which becomes progressively

brighter at successive locations around the band. Thus the location sensing signal produced by the photosensor 32 has a magnitude that is dependent on the angular orientation of the knob 117 and which thereby identifies the current setting of the knob."

Part of the passage quoted by the Examiner shows clearly that Jaeger's light pattern is not indicative of a drawing field, but is indicative of the angular orientation of the stylus.

Column 5, lines 59 to 61 say this:

"Passage of scan line 42 under the photosensor 32 initiates a location sensing signal in a manner to be hereinafter described that enables identification of the current angular orientation of stylus 12."

Jaeger's light patterns are therefore not *"indicative of a drawing field"* but are indicative of an angular orientation of the stylus 12 and at best, are indicative of a position of the stylus.

(c) Jaeger's drawing field: Jaeger does disclose a drawing field, but not in association with his light patterns. In this way, Jaeger teaches away from using coded data to interact with a drawing field. Figure 7 of Jaeger shows area 76 which might be accurately described as a drawing field. Col. 8, lines 66 to col. 9, line 4 describe this area as follows:

"In some instances it can be advantageous to provide the control panel 72 with a screen area 76 which has optical character recognition capabilities which screens are used in notebook computers or the like. This enables handwritten entry of data into a controlled circuit using the previously described stylus."

It is clear from this description that the drawing field (screen area 76) does not include *"coded data indicative of a drawing field"* nor is there any suggestion that the stylus senses any coded data in order to capture handwritten information. Instead, the entry of handwritten or drawn information is performed using known tablet and stylus methods.

In fact, Jaeger has no motivation to use any coded data in association with his drawing field because it is clear that the functionality he requires of his drawing field is satisfied by prior art stylus and tablet techniques. Because Jaeger is using a stylus and tablet arrangement, the position of the stylus relative to the tablet is known when the stylus touches the tablet. Because the position of the stylus is known, the software associated with the tablet can readily recognise that the stylus is in the drawing field and begin to capture the drawn information. There is therefore no motivation for Jaeger to introduce any *"coded data indicative of a drawing field"* to facilitate the capture of hand-drawn information.

3. Since Jaeger's light pattern is not *"indicative of a drawing field"*, since the only drawing field in the Jaeger arrangement does not even use Jaeger's light pattern to capture drawn information, and since there is no motivation to use coded data in Jaeger's drawing field, the Applicant submits that Jaeger does not disclose a system with any of the following features:

"a surface ... having coded data indicative of a drawing field"

"the sensing device, when placed operatively relative to the drawing field, generating the indicating data based at least partially on sensing at least some of the coded data"

as claimed in claim 57. Similar phrases appear in claims 1, 29, 37, and 90.

For these reasons the Applicant submits that combining the arrangements of Ward and Jaeger would not produce an invention which takes the features of claims 1, 29, 37, 57 and 90. These claims are therefore both novel and inventive in light of the cited prior art.

4. Since independent claims 1, 29, 37, 57 and 90 are novel and inventive, their respective dependent claims are also novel and inventive. Nevertheless, for completeness, the Applicant makes the following comments in relation to the dependent claims:

(a) Claims 4 and 32: The Examiner suggests that these claims are anticipated by Ward's Figure 2. However, Figure 2 does not show an interface surface, nor does it show a *"visible drawing zone defined on the interface surface."* The Applicant fails to see the relevance of Figure 2 to claims 4 and 32.

(b) Claims 5, 6, 26, 27, 33, 34, 54, 55, 58, 59, 86-89, 91-93 and 118-126: The Examiner argues that the claimed *"tags"* which are *"indicative of the drawing field"* and *"are also indicative of points within the drawing field"* are anticipated by Ward's *"multi code sequence."* However, the Examiner does not point to any particular section of Ward to support his view, nor does he give his reasons for equating the claimed *"tags"* with Ward's *"multi code sequence."* Without such reasons, the Applicant is not in a position to respond to the Examiner's objection.

(c) Claims 7, 8, 28, 35, 36, 56, 70, 71, 84, 85, 104 and 105: The Examiner suggests that the claimed tags which include *"first identity data"* and *"second identity data"* which define the position of the tag *"in relation to the drawing field"* is equivalent to the *"stylus position in terms of conversion from absolute motion to relative motion."* Again the Examiner does not refer to specific sections of Ward. Furthermore, it is difficult to see how

Ward can anticipate these specific details of the claimed coded data tags, since the Examiner admits that "*Ward does not teach the interface surface which includes coded data ...*". If Ward does not disclose coded data, it does not disclose the specific type of coded data which the Applicant has called "*tags*." The Applicant submits for these reasons that Ward does not anticipate these claims.

(d) Claims 10, 22-23, 38, 60-65 and 94-99: Again the Examiner has not pointed to particular sections of Ward to support his argument and has therefore not given the Applicant enough information to reply to the objection raised. The Applicant submits that Ward does not anticipate these claims.

(e) Claims 11, 39, 72-75 and 106: The Examiner suggests that Ward teaches that the "*sensing device includes at least one acceleration measuring device*." He equates the acceleration measuring device in the sensing device with the "*speeds of the interface processor*." In reply the Applicant submits that there is no correlation between the Ward interface and the claimed sensing device. Furthermore, the Ward stylus does not contain any sort of acceleration measuring device. For these reasons the Applicant fails to see how Ward discloses a sensing device which includes any sort of "*acceleration measuring device*." The Applicant submits that Ward does not anticipate these claims.

(f) Claims 12-15, 40-43, 76 and 107-110: These claims include a large number of features. One feature is that "*the relative displacement is obtained by doubly integrating the acceleration with respect to time*". The features listed by the Examiner as anticipating these claims make no reference to "*doubly integrating the acceleration with respect to time*" and therefore do not anticipate these claims. Another feature of these claims is that "*the acceleration measuring device includes one or more accelerometers*." Once again, the features listed by the Examiner as anticipating these claims make no reference to any accelerometers and therefore do not anticipate these claims. A number of other un-anticipated features are present in these claims but the absence of the above features from Ward should be sufficient to render further argument unnecessary. The Applicant submits that Ward does not anticipate these claims.

(g) Claims 16, 44, 77-79 and 111: The Examiner suggests that Ward anticipates the feature of "*the position elements are disposed on the surface as a regular array of dots, lines or other formations*". The Examiner suggests that Ward's "*writing recognition input device handling multiple lines*" anticipates such position elements. In reply, the Applicant submits that the "*position elements*" are clearly a form of coded data disposed on the

surface. In contrast, the feature of Ward referred to by the Examiner is merely the ability of the Ward device to capture more than one line of written text. The text "*lines*" in Ward are clearly not the same as the "*line*" embodiment of the "*position elements*" in these claims. Furthermore, as argued above, the Examiner has already admitted that Ward does not disclose any coded data. Since the "*position elements*" are a form of coded data, they cannot be anticipated by Ward.

(h) Claims 17, 45, 112 and 113: It is difficult to see how the Examiner can equate the characteristic of the position elements as being "*disposed on the surface stochastically*" with the teaching in Ward that the "*stylus which start[s] on the object, may or may not be trackable in terms of its ... position.*" Given the complete lack of correlation, combined with the fact that Ward does not disclose the use of any coded data, it is difficult to appreciate the Examiner's point. The Applicant submits that Ward does not anticipate these claims.

(i) Claims 18, 46, 80-83 and 114: Whilst it is true that Ward does disclose "*tracking of the motion of the stylus*", it is not true that this is done using "*motion sensing elements rotatably mounted to the sensing device for contact with the surface*" as is claimed. Ward therefore does not anticipate these claims.

(j) Claims 19-21, 47-49 and 115-117: Whilst it is true that Ward does disclose "*the use of a variety of stylus*", it is not true that Ward teaches any stylus having "*one or more rollerballs mounted for rotation within a constraining housing.*" Ward therefore does not anticipate these claims.

(k) Claims 24-25 and 52-53: These claims speak of the "*first identity data*" which is part of the information stored in the tags, the tags being one form of the "*coded data.*" Since Ward does not disclose any coded data, it is difficult to see how it could possibly disclose "*first identity data.*" The features of Ward mentioned by the Examiner are not relevant. The Applicant submits that Ward does not anticipate these claims.

5. The Applicant submits that the claims at present on file are not obvious in light of Ward in view of Jaeger. The Applicant requests that the Examiner reconsider his obviousness objection and allow this application to proceed to acceptance.

6. The Applicant notes that the minor amendments made to the claims at present on file were done in order to correct a number of typographical errors and to improve their clarity.

CONCLUSION

It is respectfully submitted that all of the Examiner's objections have been successfully traversed. Accordingly, it is submitted that the application is now in condition for allowance. Reconsideration and allowance of the application is courteously solicited.

Very respectfully,

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